

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF PUERTO RICO**

**COMMONWEALTH OF PUERTO RICO,
TREASURY DEPARTMENT,**
Plaintiff,

v.

OPG TECHNOLOGY, INC.,
Defendant,

v.

**RR DONNELLEY DE PUERTO RICO
CORP. and RSM ROC & COMPANY,**
Counterclaim Defendants.

Civil No. 15-3125 (JAG/BJM)

REPORT AND RECOMMENDATION

This case primarily involves a copyright dispute over a software program the Puerto Rico Treasury Department (“PRTD” or the “Department”) is using to sell and distribute internal revenue stamps and vouchers via the Internet. In December 2015, the Department sought a judgment declaring that PRTD is not infringing on two copyrights owned by OPG Technology, Inc. (“OPG”).¹ Docket Nos. 1, 5. OPG filed counterclaims against PRTD, RR Donnelly de Puerto Rico Corp. (“Donnelley”), and RSM Roc & Company (“RSM”), Docket No. 14, and moved for a preliminary injunction against PRTD. Docket Nos. 20, 54, 71-1, 88, 91, 140, 150. The Department, Donnelley, and RSM opposed. Docket Nos. 37, 57, 68, 141, 149. This matter was referred to me for a report and recommendation. Docket No. 46. An evidentiary hearing was held on August 2, 2016, Docket No. 136, and a transcript was produced. Docket No. 138 (“1st Tr.”); Docket No. 139 (“2d Tr.”).

For the reasons set forth below, preliminary injunctive relief should be **DENIED**.

¹ OPG copyrighted a design placed on Puerto Rico’s internal revenue stamps, as well as a software program that PRTD previously used for the sale and distribution of those stamps.

BACKGROUND²

At the hearing, testimony was heard from Orlin Goble (“Goble”), president of OPG; Lloyd Solly (“Solly”), Phluent, Inc.’s creative director and digital strategist; Rodrigo Morel (“Morel”), systems consultant and partner at RSM; and Yisella Gonzalez Perez (“Gonzalez”), the Department’s executive officer. And to address the similarity between OPG’s copyrighted works and PRTD’s allegedly infringing works, two expert witnesses testified: OPG called Barbara Frederiksen-Cross (“Frederiksen”), and the Department called Dr. Joshua Phinney (“Dr. Phinney”).

Sale of Stamps & Vouchers

The Department collects revenue by selling vouchers and internal revenue stamps (“stamps”) that must be affixed to certain documents, including deeds, wills, mortgages, and many other important documents. CSF ¶ 3. From 1917 to 1999, PRTD predominantly sold pre-printed stamps and vouchers that were manually inventoried, verified, authenticated, and canceled. CSF ¶ 4. The pre-printed or “traditional” stamps come in various denominations, and remain available for sale at PRTD collection offices known as “Colecturías.” CSF ¶ 96; Gonzalez Test. 2d Tr. 50:2–10; OPG Exs. 4, 5. Before July 2015, 89 Colecturías were operating in Puerto Rico. CSF ¶ 106. The Department has since closed some of these offices, and only 65 Colecturías remain in operation—58 of which are open Monday through Friday from 8:00 a.m. to 3:30 p.m., and seven of which are open those same days from 7:30 a.m. to 7:00 p.m. CSF ¶¶ 106–11; 1st Tr. 4:20–23. Approximately 450 employees currently staff the Colecturías, though Gonzalez testified that these employees perform various functions and are not “dedicated exclusively” to selling pre-printed stamps. CSF ¶ 112; 2d Tr. 54:23–55:3.

² This account is based upon the testimony presented during the hearing; the evidence OPG submitted, Docket No. 143; the evidence PRTD submitted, Docket No. 144; the parties’ Corrected Stipulated Facts (“CSF”), Docket No. 127 at 1–30; and the parties’ amended joint exhibits (“J. Ex.”). Docket No. 127 at 30–33; Docket No. 148.

The pre-printed stamps lack adequate “security controls,” have previously been the subject of “pervasive fraud,” and cost the Department “millions” in revenue when this was the predominant revenue-collection method. CSF ¶¶ 6–7. Around 1999, the “documented loss” of revenues prompted PRTD to “migrate from a manual to a digital system.” CSF ¶ 8. Puerto Rico Law 331,³ which was enacted in 1999, authorized the electronic sale of stamps and vouchers via the Internet. CSF ¶¶ 4, 5. This statute also permitted PRTD’s Secretary to enter into agreements for the design, development, implementation, and operation of an online system that verified and canceled digital stamps and vouchers. CSF ¶ 9.

The Department lacked the financial and technical means to develop the online system authorized by Law 331, and so it sought the help of a private technology company. CSF ¶¶ 10–13. To specify the content and security features that must be displayed on a stamp produced by the online system, the Department issued circular letters. CSF ¶¶ 16, 20. Between 1999 and 2001, PRTD worked with various companies to develop an online system.⁴ CSF ¶¶ 14–21. During this time period, the Department issued Circular Letters 1300-07-00 and 1300-10-01. CSF ¶¶ 16, 20. Following an unsuccessful attempt by one of the companies, an online system was finally developed around 2001 to sell stamps to attorneys. CSF ¶¶ 19–21. This online system, which was the first to be operated throughout Puerto Rico after Law 331 was enacted, was spearheaded by Revenue Solutions of Puerto Rico (“RSPR”). CSF ¶ 21.

Afterward, and per Law 331, the Department promulgated Regulation 59, which specified the conditions for authorizing an agent to sell electronic stamps and vouchers, as well as the information that must be included in each stamp or voucher. CSF ¶¶ 22–24. For example, Regulation 59 requires a stamp to be printed on security paper and to

³ Law 331 of December 10, 1999. P.R. Laws Ann. tit. 13, §§ 311–316b.

⁴ These companies included Neopost Online, Inc., Hart Sales & Marketing, Inc., United Systems of Arkansas, Internet Revenue Solutions, and Revenue Solutions of Puerto Rico. CSF ¶¶ 14–21.

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 4 specify the type of stamp that was sold, the date when it was printed, the stamp’s value, and any other information required by the Department. CSF ¶ 24. In 2002 and 2006, the Department issued Circular Letters 1300-09-03 and 1300-07-07, respectively, to continue specifying the content and security controls that were required for electronic stamps and vouchers. CSF ¶¶ 27, 28. The document produced by the system must function as both a stamp and receipt, and so a stamp produced by the system must produce a stamp that has a stamp on one side and a receipt on the other.

OPG’s System

In late 2006, the Department sought to replace RSPR’s system with an online system that had added security features, including the ability to authenticate a stamp or voucher, and to cancel those instruments upon presentation. CSF ¶¶ 29–30. Two companies responded to PRTD’s invitation to develop such a system: OPG and Evertec.⁵ CSF ¶ 31. OPG was informed of the problems associated with pre-printed stamps, and, from March 2007 to May 2008, worked to develop an online system meeting PRTD’s needs and Circular Letter 1300-07-07. CSF ¶¶ 32–33. In November 2007, the Department and OPG executed a Sales Agency Agreement. CSF ¶ 37. OPG was a “sales agent” under the Agreement, and was required to provide an online system that permitted the purchase and cancelation of stamps and vouchers. CSF ¶¶ 37, 38.

To develop the software for the online system, as well as the design for the stamp, Goble subcontracted Solly and his team at Phluent, Inc. (“Phluent”). Goble Test. 1st Tr. 110:17–25. To create the stamp design, Solly started by looking at the PRTD stamp. 2d Tr. 9–11; *see* App’x D. After seeing PRTD’s 2002 stamp, he saw much room for improvement. 2d Tr. 9–11; OPG Ex. 6 at 1. Seeing the stamps as a form of legal tender, Solly added various security features: for example, he replaced the 2 x 2 matrix barcode with a 4 x 4 matrix barcode; made the stamp smaller so that it could be affixed to

⁵ Evertec also developed an online system, and both OPG and Evertec were authorized by PRTD to be “agents” of the Department. CSF ¶¶ 35, 36.

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 5 documents with greater ease; added the four-part, computer-generated serial number; and added fine line work to the stamp. 2d Tr. 9–11, 17, 25. These design choices and others came about, according to Solly, through an iterative process. 2d Tr. 24:20–25:2. Solly added that his decision to give the stamp an amber color was “almost completely arbitrary” because he wanted the stamp to “reflect” a “sunshine that is magic” in Puerto Rico.⁶ 2d Tr. 26:4–24.

To create the software, Solly testified that he and his team made many design choices to enhance the “user experience” of someone seeking to purchase a stamp via an online system. 2d Tr. 16:9–17:3, 23:3–19. The online system ultimately developed was called “sellosycomprobantes.com” (“OPG’s System”), and cost OPG “close to a million dollars.” CSF ¶ 34; Goble Test., 1st Tr. 92:3–7, 93:5–8. OPG’s system consisted of the following web-based platforms: (1) Digital Internal Revenue Stamp and Voucher Sales, which is used to purchase stamps and vouchers and to create user reports; (2) Administrative Application, which is used to manage accounts and reports; and (3) Government Application, which was used by PRTD’s officials to sell, cancel, and verify stamps and vouchers, to provide reimbursements, to manage users with a government-user account, and to generate reports for the Department. CSF ¶ 46. OPG’s system also had various security features and capabilities. CSF ¶¶ 48, 49.

In the first two years, OPG’s System generated 6% of all stamps and vouchers sold in Puerto Rico, and helped collect millions of dollars in revenue. CSF ¶ 62. In 2009, OPG and PRTD agreed to expand OPG’s System through various phases until all bank branches and Colecturías were on board with the system. CSF ¶¶ 65–68. OPG’s System ultimately increased the number of users for the online sale of vouchers and stamps, as it allowed one or three stamps to be printed on laser jet printers stocked with a special type

⁶ On cross-examination, Solly acknowledged that the stamps had to comply with PRTD’s circular letters. 2d Tr. 39:10–40:2. He also acknowledged that the PRTD’s 2002 stamp had a yellow bar located at the bottom of the stamp, though he made clear that the 2002 stamp itself was white. 2d Tr. 41:10–19.

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 6 of PRTD-approved security paper that OPG hired another company to create. CSF ¶¶ 50–61. OPG provided to the Colecturías all the equipment for the system, including the computers, screens, printers, printer ink, and paper. Goble Test., 1st Tr. 95:23–96:2.

The initial agreement between PRTD and OPG was re-executed or amended various times between July 2008 and July 2015. CSF ¶ 39. In each agreement signed by the parties, they agreed to a confidentiality clause, agreed that OPG was a legal licensee of the online system, and agreed that OPG would obtain PRTD’s written approval before making any changes to the online system or the printable materials associated with that system. CSF ¶¶ 40–42. In 2010, 2011, 2012, the Department issued Circular Letters 1300-02-11, 1300-01-12, and 1300-33-12, respectively, to continue specifying the content and security controls that were required for electronic stamps and vouchers. CSF ¶¶ 69, 70, 73. Around this time period, OPG’s System developed a larger customer base: in August 2012, the Department permitted the system to be used for stamps and vouchers for the Puerto Rico Registry of Property.⁷ CSF ¶ 74.

PRTD’s New Online System

In April 2014, OPG responded to PRTD’s technical questions about the online system OPG created, including inquiries about the system’s structure, architecture, and relational database. CSF ¶ 80. Around a month later, the Department requested proposals from companies willing to sell and print stamps and vouchers, and that request for proposal (“RFP”) went unanswered. CSF ¶¶ 78–79. A few months later, OPG sought to copyright its software program, and in December 2014 the U.S. Copyright Office issued a certificate of registration to OPG for a computer program named “Sellos y Comprobantes.” CSF ¶ 82; 1st Tr. 4:12–19. Solly does not claim that Phluent owns the copyright to the software program; rather, he testified that the computer program’s

⁷ While pre-printed stamps were to be phased out for the Registry of Property, they ultimately remained in use. CSF ¶¶ 75–76.

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 7 intellectual property rights belong to OPG, and that he does not “recall any changes” to the software since it was submitted for registration. 2d Tr. 38:14–39:1.

On January 8, 2015, PRTD requested proposals directed to a “Project for the Centralization of Stamps and Vouchers.” CSF ¶ 97. Gonzalez was “given management duties to make th[is] project come to fruition.” 2d Tr. 44:9–12. The proposal was prompted by PRTD’s need to manage information relating to the stamps and vouchers on a daily basis, to control the stamps and vouchers sold by and to agencies, and to have a “standardized connection” to third parties who sell the stamps and vouchers. CSF ¶¶ 100, 101. In short, Gonzalez explained there were problems with receiving daily information about the sale of stamps with OPG’s System, and so the Department sought to have its own online system. Gonzalez Test. 2d Tr. 44:23–45:7. PRTD invited various entities—but not OPG—to respond to the RFP. CSF ¶ 101.

A response to the RFP was due eight days later (on January 16), the design for the project was to be presented by February 28, 2015, and the final version of the new software was to be delivered by April 15, 2015.⁸ CSF ¶ 98. Five entities responded to the RFP on January 16. CSF ¶ 102. The proposals were evaluated according to whether the software developed would be owned by PRTD, the amount of time the company would require to develop the software, the company’s compliance with the specifications in the RFP, and the company’s asking price. CSF ¶¶ 103, 104. After this evaluation process, RSM, which has “never” been an “agent” authorized to sell stamps and vouchers, was awarded the Project for the Centralization of Stamps and Vouchers. CSF ¶¶ 92, 105.

In March 2015, the Department and RSM entered into a contract in which RSM agreed to develop software for the sale and distribution of stamps and vouchers within 30 days. CSF ¶ 84. The online system developed would be for PRTD’s exclusive ownership and use (“PRTD’s System”). CSF ¶ 84. The contract was set to expire in June 2015, but it

⁸ The RFP required that the proposals abide by Circular Letters 1300-02-11, 1300-01-12, 1300-33-12, and 1300-10-14. CSF ¶ 99.

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 8 was later extended to run until September 2015. CSF ¶¶ 85–86. The contract was re-extended to run until December 2015, and this time RSM committed to preparing an RFP for the printing, warehousing, and distribution of security paper to be used with the software it developed for PRTD. CSF ¶ 87.

Morel testified about RSM’s efforts to develop PRTD’s System, which is a software program written in the computer language “C Sharp,” 2d Tr. 81:3–5, and which has its database in a computer at the Treasury Department’s mainframe computer. 2d Tr. 81:8–12. At the outset, Morel relayed that the project was within RSM’s line of work, as the company provides services relating to “network security, infrastructure, systems development, [and] systems implementation.” 2d Tr. 67:1–3. He also testified that RSM had worked on multiple projects for PRTD since 1985. 2d Tr. 67:7–18. More recently, PRTD hired RSM in 2013 to create a web-based system for use “only by internal users” at specific Colecturías who “gather tax filings.” 2d Tr. 68:4–22, 73:15–20. Additionally, in 2014 RSM was hired for a “pretty complex project” to develop a system that allows “financial institutions in Puerto Rico” to “report certain transactions to” the Department. 2d Tr. 68:4–22, 72:10–13, 73:15–20. To develop both of these systems, RSM devoted “about eight weeks” from “start to finish.” 2d Tr. 73:15–21.

Morel acknowledged that PRTD’s RFP for the new project was “aggressive.” 2d Tr. 94:4–17. But he committed to delivering the project in 12 to 14 weeks because (1) the team he would use was a “little bit bigger” than the teams on prior projects, (2) the development team, which had experience working on the projects for PRTD in 2013 and 2014, was “reassigned for this new project”; and (3) RSM had already built “most of the final system” as a result of working on the two prior two PRTD projects. 2d Tr. 69–70, 79:10–18. For example, RSM had “already built” the framework for allowing “the Treasury Department to participate as a user of the system,” and knew how to build the “screen[s]” and the “drop downs.” 2d Tr. 78:5–9, 72:19–23. As a result of this prior

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experience, Morel testified that RSM was able to re-use the code created for the prior two
projects when developing PRTD's System. 2d Tr. 72:10–73:10.

Morel added that PRTD's System is not a “complex one,” saying that “at the end of the day” the system is designed to “enter stamps into a shopping cart, and . . . hit the print button.” 2d Tr. 80:19–81:2. Morel also testified that RSM had “absolutely” no access to the source code or object code for OPG's System, and that PRTD did not give RSM any access to OPG's System. 2d Tr. 78:15–22. According to Morel, his knowledge of OPG's System has come about from his involvement in this case. 2d Tr. 78:21–22. Morel did acknowledge that when he was developing the new system, he watched Colecturía employees as they performed their tasks, which included looking at “two screens” on the computer. 2d Tr. 101:19–21. But he made clear that when he was watching PRTD's employees, the “purpose was not to understand the screens,” but rather to “understand what” the employees “did” and “what were the steps” they took. 2d Tr. 102:4–6. He added that he was not shown how OPG's System operated. 2d Tr. 101:15–17.

On November 6, 2015, PRTD requested proposals for designing, printing, warehousing, and delivering security paper that would be used with software provided by the Department. CSF ¶ 88. At a mandatory pre-bid meeting held on November 13, PRTD allowed the attendees (which included RSM's representatives) to access the printable materials that would be used with the project, and disclosed that Donnelley had designed these printable materials at the Department's request. CSF ¶¶ 88–90. The Department ultimately awarded to Donnelley the security paper project detailed in the November 6 RFP. CSF ¶ 93. On November 18, RSM and PRTD extended their contract to improve the online system that RSM would develop for the Department. CSF ¶ 91. A few days later, OPG sent PRTD and others a notice of copyright infringement. CSF ¶ 92.

Status Quo

On April 1, 2016, the Department launched PRTD’s System. CSF ¶ 96. Circular Letter 1300-10-14 was used to design PRTD’s new stamp, and the Department contracted with Madelyn Alicea (“Alicea”) to create the stamp’s design, which was modified to comply with the Department’s circular letters. Gonzalez Test., 2d Tr. 48–49; J. Ex. 14. Gonzalez acknowledged that the stamps produced by the new online system are “very similar” to the ones produced by OPG, though she underscored that there were “some differences and some similarities.” 2d Tr. 63:14–16; App’x C.

Before PRTD’s System went live, approximately 800 entities (including law firms, banks, municipalities, and many others) were using OPG’s online system to print stamps from their own offices. Goble Test., 1st Tr. 96:9–15. With PRTD’s System, third-party agents authorized by the Department now use PRTD’s System for the purchase and sale of stamps. CSF ¶ 114. From April 2016 to the time of the hearing, the Department collected \$9 million per month from the sale of pre-printed stamps, 2d Tr. 51:18–21, and \$6 to 7 million per month from thousands of transactions on PRTD’s System. 2d Tr. 50. The Department collected approximately \$10 million under OPG’s System, and Gonzalez attributed the difference in sales to Sistema Caribe, a new system that was implemented to obtain vouchers used for the Registry of Property. 2d Tr. 51.

At the hearing, Goble was asked why OPG was requesting an injunction. He asserted that OPG is suffering “irreparable damage” because PRTD “is taking[,] . . . stealing,” and copying OPG’s software and stamp. 1st Tr. 101:4–7. Goble added that since PRTD’s system was implemented, he has received complaints from former customers who are confusing PRTD’s System with OPG’s, and who complain that the new stamps are of low quality, which Goble sought to demonstrate at the hearing by scratching one of the stamps. 1st Tr. 102–04; OPG Ex. 4. He also asserted that OPG was “negotiating with the municipalities to start using” OPG’s System, but the municipalities

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 11 decided to hold off on any agreements “after all the chaos” and PRTD’s “lawsuit,” which put “a huge question mark over” OPG’s System. 1st Tr. 106–07.

The parties also explored at the hearing whether the Department could sell pre-printed stamps to collect revenue in the event PRTD was forced to stop using the online system. Gonzalez testified that the Colecturías were not “capable” of “absorbing the volume of sales that are presently made via” PRTD’s System. 2d Tr. 53:6–10. To explain why this was so, she provided the following illustration: one of the approximately 190 entities approved to use PRTD’s System is Banco Popular, which has approximately 200 users spread through the bank’s 20 to 25 branches in Puerto Rico. 2d 53:16–25. And Banco Popular is only “one example” of the 190 entities. 2d Tr. 53:16–25.

Gonzalez also highlighted that “the sale of stamps and vouchers is not the only transaction that is carried out” by the 450 employees who work at the Colecturías. 2d Tr. 54:23–55:3. And while Gonzalez acknowledged that there is an inventory of pre-printed stamps, she was unaware of the amount of inventory available. 2d Tr. 63:23–64:7, 64:18–19. In light of this, she was unable to say whether the Department could satisfy the demand of pre-printed stamps. 2d Tr. 64:11–15.

Both parties hired expert witnesses to opine on the similarities and differences between OPG’s System and PRTD’s.⁹

Frederiksen’s Report

Frederiksen testified as an expert witness in “forensic software and computer software design.” 1st Tr. 23:4–6. She prepared a report, which was admitted at the hearing, providing several expert opinions. OPG Ex. 2. As an initial matter, she opined that OPG’s System was an original work. *Id.* ¶ 11.1. In determining whether “PRTD’s System literally copies any [of] OPG’s copyrighted material,” Frederiksen acknowledged that she was “not provided with the source code for . . . PRTD’s System,” and that her

⁹ The expert witnesses also compared the OPG stamp design and the PRTD stamp design. Below, I explore the similarities between the two stamp designs. *See infra* Pt. I.B.

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 “examination was necessarily limited to a comparison based primarily on the web pages, navigation behaviors, stamp design, and media design of the systems.”¹⁰ *Id.* ¶¶ 11.2, 19. After this examination, she opined that both systems “compose stamp serial numbers that are comprised of identical components arranged in the same order.” *Id.* ¶ 11.2 According to her report, the serial numbers produced by both systems have a five-digit number corresponding to the “vendor number,” followed by four digits for the year when the stamp was printed, followed by four digits corresponding to the month and day when the stamp was printed, and, finally, followed by an eight-digit “serial number.” *Id.*

Frederiksen further opined that PRTD’s System “copies non-literal elements of OPG’s copyrighted material.” *Id.* 11.3. Her report states that the “overall organization” of both systems is “very similar,” and that both systems “provide a user with many of the same capabilities, including the ability to buy, verify, cancel, and report on revenue stamps.” *Id.* She added that some “of the web pages” in “PRTD’s System are substantially similar to the corresponding web pages of” OPG’s System, “particularly with respect to the selection, arrangement, and presentation of data on the web pages.” *Id.* Frederiksen particularly homed in on “web pages used to purchase stamps,” opining that the “stamp purchase page has a strikingly similar selection and arrangement of data elements.” *Id.*

In forming the foregoing opinions, Frederiksen asserted that the similarities she observed could not be explained by “constraints or materials found in the public domain.” *Id.* ¶ 11.6. And while she acknowledged that “some data elements from the web pages” in PRTD’s System “are arguably required for the operation of a system that generates revenue stamps,” this constraint did not explain the “selection and arrangement of the data elements that are collected when the user interacts with the system.” *Id.* Frederiksen added that “the specific sequence, organization, and presentation format of the data

¹⁰ Put another way, Frederiksen did not compare the literal elements of the two programs.

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 13 elements” on a stamp put to rest an argument that “the similarities in stamp and media design” were constrained by the function the stamp was meant to serve. *Id.* For example, according to her report, unexplained similarities between the two systems include “the overall print layout and selection and arrangement of textual content, the choice of barcode style, the data embedded in the barcode, the format and structure of the stamp serial number, and the choice on some stamp types to include optional descriptive detail that is arranged as three separate display fields.” *Id.*

Turning to the specific similarities in the “overall design and architecture” of the two systems, Frederiksen opined that “there is substantial similarity in the overall design of the user interfaces and processing provided” by the two systems. *Id.* ¶ 28. The similarities included “navigation choices, the order and sequencing of web pages presented to the user, and the selection, ordering, and arrangement of data on specific web pages.” *Id.* When examining specific user interface web pages, Frederiksen used “an abstraction-filtration-comparison methodology.” *Id.* After performing this analysis, she acknowledged that “some of the data elements on some of the web pages appeared to be dictated by functional requirements.” *Id.* ¶ 31. After “eliminating those similarities,” Frederiksen maintained her opinion that there were substantial similarities because she focused on the “ordering and arrangement of the data on the web pages.” The ordering and arrangement of the elements on each web page, Frederiksen opined, were “creative choices made by the programmer or designer of the web pages” and constituted “expressive elements” of the design of OPG’s System. *Id.* ¶¶ 32, 33.

To illustrate the foregoing, Frederiksen’s report focused on two web page screens. She first examined the screens for purchasing stamp type 5120 (“Screen 1”). Ex. 3 of OPG Ex. 2; App’x A. After noting the similarities in both systems for Screen 1, she explained that there was no constraint on the “order of the fields” or on the “additional lines of detail that may be entered by the user” even if one assumed that the other elements “are necessary to allow a user to purchase a stamp.” OPG Ex. 2 ¶¶ 35, 36. The

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 14 other example was the serial-number verification screen that is available in both systems (“Screen 2”). Ex. 5 of OPG Ex. 2. In comparing both systems’ Screen 2, Frederiksen focused on the similarity between the four-component number generated by each system, and homed in on the “specific selection, arrangement, and formatting used to generate the stamp serial number.” OPG Ex. 2 ¶¶ 37, 39; App’x B. In Frederiksen’s opinion, there was “no technical reason that the stamp serial numbers should contain exactly the same data elements, arranged in exactly the same order, and conforming to the same format.” *Id.* ¶ 38.

Frederiksen’s report also included comparisons of the user interface screens that one would see when seeking to purchase 10 distinct stamp types. Ex. 7 of OPG Ex. 2. At the hearing, Frederiksen acknowledged that there were differences in the two systems. 1st Tr. 38:7–9. Frederiksen suggested that she focused on Screens 1 and 2 because “[t]here were many screens [she] looked at where the data was presented in different orders, arranged in different orders, [or] maybe even different data [was provided].” For other stamps, “the data was split across multiple screens, or there was some other . . . significant difference that [she] didn’t find compelling and substantial.” 1st Tr. 38:9–18.

Dr. Phinney’s Report

The Department retained Dr. Joshua Phinney (“Dr. Phinney”), who testified as an expert witness in “computer programming” and prepared a report responding to the opinions in Frederiksen’s report. 2d Tr. 117:2–5; PRTD Ex. 1. Dr. Phinney opined that “PRTD did not copy the source code of OPG’s” System. PRTD Ex. 1 ¶ 11. He based this opinion on “[f]eatures of particular pages within PRTD’s system, the different software platforms of the two systems, as well as the organization of PRTD’s website as a whole.” *Id.* Dr. Phinney also opined that “PRTD’s system does not copy non-literal components of OPG’s system, particularly with respect to selection, arrangement, and presentation of the data on the web pages.” *Id.* ¶ 12.

Dr. Phinney's report responds to Frederiksen's comparison of both systems' Screen 1. Dr. Phinney highlights that Frederiksen's "conclusion is not based on the actual sequence of selections and fields presented to the user." *Id.* ¶¶ 24, 25. He underscores that the "very first option" in OPG's System is the ability to choose whether one or three stamps will be printed. *Id.* ¶ 25. In contrast, this option is the last step in PRTD's System. *Id.* ¶ 26. Moreover, Dr. Phinney underscores that PRTD's system first presents a user with only three data fields—not seven. These three data fields are: (1) "cifra," (2) group, and (3) the type of document/stamp a user seeks to purchase. *Id.* ¶ 27.

The foregoing is particularly significant, Dr. Phinney explains, because (1) OPG's System does not have a "cifra" data field (which permits the user to enter a code that directs funds to a particular agency), and (2) the data fields that ultimately populate on the screen, in addition to the first three fields, depend on the type of stamp selected. *Id.* ¶¶ 28–29. Moreover, the data fields that ultimately populate onto the screen, Dr. Phinney explains, are functional insofar as they ask for information that is necessary to generate the information required to produce a particular stamp. *Id.* ¶¶ 30–32.

Turning to the specific order of the data fields, Dr. Phinney highlighted that Frederiksen's report identified seven data fields in OPG's System, and that Frederiksen did not count the option of whether a user wants one or three stamps as one of the fields. Frederiksen's report then ordered the fields in OPG's System for a 5120 stamp as follows: (1) group (2) type of stamp, (3) value of stamp, (4) quantity of stamps desired, (5) detail field one, (6) detail field two, and (7) detail field three. Frederiksen's report then compared this sequence with the sequence of the fields in PRTD's system to suggest that these seven fields are similar in PRTD's System. But as Dr. Phinney correctly pointed out, Frederiksen's report inaccurately describes the order in which these seven elements appear in PRTD's System. In PRTD's System, the order of the data fields for this same stamp is as follows: (1) cifra, (2) group, (3) type of stamp, (4) value of stamp, (5) quantity of stamps, (6) method of payment, (7) detail field one, (8) detail field two, and

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(9) detail field three. And while both systems have three data fields at the bottom of the screen, Morel testified that there was a functional, logical reason for the placement of the three data fields at the bottom of the screen rather than the top of the screen: if the optional fields were placed at the top, then a user would have to constantly skip the three data fields when seeking to buy a stamp for which these data fields are unnecessary. Morel Test. 2d Tr. 104:21–105:25.

Turning to Screen 2, Dr. Phinney highlighted that PRTD's System includes a CAPTCHA (a "Completely Automated Public Turing test to tell Computers and Humans Apart") test, and that OPG's system does not. PRTD Ex. 1 ¶ 38. Dr. Phinney also disagreed that there was "no technical reason" that the serial numbers produced by each system should contain exactly the same data elements, arranged in exactly the same order, and conforming to the same format. PRTD Ex. 1 ¶ 33. As an initial matter, he pointed out that "the arrangement of the fields in the serial number is information by which the stamp is verified against a Treasury database," and that Frederiksen's report fails to discuss "whether PRTD has a practical interest in maintaining their internal records with such organization." PRTD Ex. 1 ¶ 34. Dr. Phinney also underscored that the fourth component of the four-component serial number is actually generated differently in each system. PRTD Ex. 1 ¶ 35. At the hearing, it was revealed that OPG's system always generates an eight-digit number, while PRTD's System generates an eight- or nine-digit number. 2d Tr. 86:6–12. RSM's Morrell testified that the extra digit was added to increase the security of the stamp, but declined to comment on the mechanism by which the PRTD System generates either an eight- or nine-digit number for that very reason. 2d Tr. 86:21–23. Frederiksen acknowledged at the hearing that she did notice that PRTD's System produced an eight- or nine-digit number and that this was a "distinction" between the two systems. 1st Tr. 66:8–13. Left unexplained, however, was the reason her report stated that serial numbers created by both systems were exactly the same. OPG Ex. 1 ¶ 38.

Dr. Phinney further disagreed with Frederiksen that the overall design and functionality of the two systems was similar. PRTD Ex. 1 ¶¶ 39–41. He highlighted various examples of the differences between the two systems. First, PRTD’s System, but not OPG’s, allows PRTD to manage the interaction of customers, the Department, and the print-media vendor. PRTD Ex. 1 ¶ 40. Second, PRTD’s System assigns *one* entity number to a large bank, such as Banco Popular, while OPG’s System assigns a distinct user identification number for each branch of a large bank. PRTD Ex. 1 ¶ 40. Third, commissions are collected differently under the two systems. PRTD Ex. 1 ¶ 40. Fourth, the PRTD System includes a new feature for “tracking issued stamps from individual vendors.” PRTD Ex. 1 ¶ 40. Fifth, PRTD’s System “includes numerous new reporting features (e.g., for users and print media) not included in the OPG System.” PRTD Ex. 1 ¶ 40. Thus, Dr. Phinney concluded that PRTD’s System does not infringe OPG’s copyrighted software.

DISCUSSION

OPG contends preliminary injunctive relief is warranted to stop PRTD’s alleged copyright infringement.¹¹ Docket Nos. 20, 140, 150. The Department responds that each of the four traditional equitable principles militate toward a finding that OPG is not entitled to a preliminary injunction. Docket Nos. 37, 141, 149.

¹¹ OPG previously requested injunctive relief for its non-copyright claims, including, among others, a claim for violation of Puerto Rico Law 75, P.R. Laws Ann. tit. 10, § 278. Docket No. 20 at 41–46. However, OPG’s counsel represented at the hearing that “[t]his is a copyright case,” relayed that the hearing was not meant to explore other claims, and objected when PRTD’s counsel attempted to introduce evidence that might have been relevant to other causes of action. 2d Tr.45:8–22, 57:3–58:5. For example, OPG’s counsel represented that OPG was “not claiming that” it was “kicked out” from a contract—which is the type of inquiry generally conducted under Law 75. 2d Tr. 57:16–17. Moreover, while OPG’s post-hearing brief includes a footnote incorporating arguments from the initial request for a preliminary injunction, OPG’s post-hearing brief and reply are entirely devoted to the copyright claims. Docket Nos. 140 n.1, 150. The post-hearing brief and reply filed by PRTD, Donnelley, and RSM are also limited to the copyright claims. Docket Nos. 141, 149. In light of the foregoing, the discussion below is limited to OPG’s copyright claims.

To obtain preliminary injunctive relief, a plaintiff must demonstrate “that he is *likely* to succeed on the merits, that he is *likely* to suffer irreparable harm in the absence of preliminary relief, that the balance of equities tips in his favor, and that an injunction is in the public interest.” *Winter v. Nat. Res. Defense Council, Inc.*, 555 U.S. 7, 20 (2008) (emphases added) (preliminary relief may not be granted when the movant only demonstrates “possible” irreparable harm). “A preliminary injunction is an extraordinary remedy never awarded as of right,” and the Supreme Court has instructed that in “exercising their sound discretion, courts of equity should pay particular regard for the public consequences in employing the extraordinary remedy of injunction.” *Id.* at 24.

I. Likelihood of Success

OPG contends that PRTD is infringing on two copyrights owned by OPG: one for a software program called Sellos y Comprobantes, and another for a 2-D design that was printed on the stamps sold by PRTD when OPG’s System was still in use.¹² In any copyright infringement suit, a plaintiff “has the burden of proving two elements: ‘(1) ownership of a valid copyright, and (2) copying of constituent elements of the work that are original.’” *Airframe Sys., Inc. v. L-3 Commc’ns Corp.*, 658 F.3d 100, 105 (1st Cir. 2011) (quoting *Situation Mgmt. Sys., Inc. v. ASP. Consulting LLC*, 560 F.3d 53, 58 (1st Cir. 2009)). All “copying does not invariably constitute copyright infringement,” *Johnson v. Gordon*, 409 F.3d 12, 18 (1st Cir. 2005), and so to establish *actionable* copying, the plaintiff must prove: “(a) that the defendant actually copied the work as a factual matter,” and “(b) that the defendant’s copying of the copyrighted material was so extensive that it rendered the infringing and copyrighted works ‘substantially similar.’” *Situation Mgmt.*, 560 F.3d at 58 (quoting *T-Peg, Inc. v. Vt. Timber Works, Inc.*, 459 F.3d 97, 108 (1st Cir. 2006) (internal quotation marks omitted)).

¹² Donnelley argued that the request for injunctive relief is moot because PRTD’s System has begun operating. Docket No. 68. The argument lacks merit because a live copyright dispute remains. *See County of L.A. v. Davis*, 440 U.S. 625, 631 (1979) (case “is moot when the issues presented are no longer ‘live’ or the parties lack a legally cognizable interest in the outcome.”).

Establishing as a factual matter that the defendant actually copied the copyrighted work is necessary to establish liability. *Airframe Sys.*, 658 F.3d at 106. This is so because “even when two works are substantially similar with respect to protectable expression, if the defendant did not copy as a factual matter, but instead independently created the work at issue, then infringement liability must be denied.” *Airframe Sys.*, 658 F.3d at 106 (quoting 4 Nimmer & Nimmer, Nimmer on Copyright § 13.01[B], at 13–10). To make the requisite showing, a plaintiff may rely on direct or circumstantial evidence. *Soc'y of Holy Transfiguration Monastery, Inc. v. Gregory*, 689 F.3d 29, 49 (1st Cir. 2012).

“Proving actual copying by direct evidence is generally a difficult task, as it is the rare case in which the specific act of copying was witnessed, observed, or recorded.” *Id.* “For this reason, parties typically rely on circumstantial evidence to prove [1] that the defendant had access to the protected work *and* [2] that the resulting product, when fairly compared to the original, was sufficiently similar that actual copying may properly be inferred.” *Id.* (emphasis added). The First Circuit has “termed the degree of similarity for purposes of indirectly adducing evidence of copying, ‘probative similarity.’” *Id.* *Probative* similarity “is not to be confused” with *substantial* similarity—they are analytically distinct inquiries. *Id.*

Even when actual copying is admitted or established through direct or circumstantial evidence, there is no copyright infringement unless the actual copying is “extensive enough to render the works ‘substantially similar.’” *Airframe Sys.*, 658 F.3d at 106. “Substantial similarity between the copyrighted work and the allegedly infringing work ‘is assessed by comparing the protected elements of the plaintiff’s work as a whole against the defendant’s work.’” *Airframe Sys.*, 658 F.3d at 106 (quoting *Situation Mgmt.*, 560 F.3d at 59.). This assessment is made by the factfinder under the “ordinary observer test.” *Airframe Sys.*, 658 F.3d at 106. Substantial similarity is found under this test “if a reasonable, ordinary observer, upon examination of the two works, would ‘conclude that

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 20 the defendant unlawfully appropriated the plaintiff's protectable expression.”” *T-Peg, Inc.*, 459 F.3d at 112.

When conducting the substantial similarity inquiry, the court “must focus on those aspects of the copyrighted work that are original.” *Coquico, Inc. v. Rodriguez-Miranda*, 562 F.3d 62, 68 (1st Cir. 2009). “Such examination may require more than the simple determination that ‘an overall impression of similarity’ between the contested works as a whole exists.” *Soc'y of Holy Transfiguration Monastery*, 689 F.3d at 50; *see also Yankee Candle Co. v. Bridgewater Candle Co., LLC*, 259 F.3d 25, 33 (1st Cir. 2001) (“The determination of whether an allegedly infringing [work] is substantially similar to [another work] is not so simple a task . . . as a strict visual comparison of the two items.”).

The proper inquiry usually requires the court to “‘dissect[] the copyrighted work and separat[e] its original expressive elements from its unprotected content,’ honing in solely on the unique (and thus protected) components.” *Soc'y of Holy Transfiguration Monastery*, 689 F.3d at 50 (quoting *Coquico*, 562 F.3d at 68). But even for parts of the work that constitute expression, the “merger and scènes à faire doctrines limit the availability of copyright protection.” *Harney v. Sony Pictures Television, Inc.*, 704 F.3d 173, 181 n.8 (1st Cir. 2013). The merger doctrine “denies copyright protection when creativity merges with reality; that is, when there is only one way to express a particular idea.” *Coquico*, 562 F.3d at 68. “The doctrine of scènes à faire denies copyright protection to elements of a work that are for all practical purposes indispensable, or at least customary, in the treatment of a given subject matter.” *Id.* With these generally applicable copyright principles underfoot, I now turn to each of OPG’s works that were allegedly infringed.

A. Computer Program

It is well settled by now that computer programs are afforded copyright protection as “literary works.” *Lotus Dev. Corp. v. Borland Int'l, Inc.*, 49 F.3d 807, 813 (1st Cir.

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 21 1995), *aff'd by an equally divided court*, 516 U.S. 233 (1996) (citing 17 U.S.C. § 102(a)(1) (granting protection to “literary works”)). But while it is beyond cavil that such protection exists, “the application of copyright law to the domain of computers has been extremely difficult.” *Real View, LLC v. 20-20 Techs., Inc.*, 683 F. Supp. 2d 147, 151 (D. Mass. 2010) (citing *Lotus*, 49 F.3d at 820 (Boudin, J., concurring) (“Applying copyright law to computer programs is like assembling a jigsaw puzzle whose pieces do not quite fit.”); 4 Melville B. Nimmer and David Nimmer, *Nimmer on Copyright* § 13.03[E][4], [F] (Matthew Bender, Rev. Ed.) (explaining that computer programs pose a “special challenge” and noting that “evaluating the similarity between two computer programs is often exceedingly difficult”)). At the outset, a foundational understanding of a computer program is helpful: a “computer program can often be parsed into at least six levels of generally declining abstraction: (i) the main purpose, (ii) the program structure or architecture, (iii) modules, (iv) algorithms and data structures, (v) source code, and (vi) object code.” *Paycom Payroll, LLC v. Richison*, 758 F.3d 1198, 1205 (10th Cir. 2014).

Copyright protection “can extend to both literal and non-literal elements of a computer program.” *Oracle Am., Inc. v. Google Inc.*, 750 F.3d 1339, 1355 (Fed. Cir. 2014), *cert. denied*, 135 S. Ct. 2887 (2015). “The literal elements of a computer program are the source code and object code.” *Id.* A program’s source code is “the spelled-out program commands that humans can read.” *Lexmark Int'l, Inc. v. Static Control Components, Inc.*, 387 F.3d 522, 533 (6th Cir. 2004) (citing 17 U.S.C. § 101 (defining “computer program[s]” as “set[s] of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result”)). After the source code is developed, that code is translated into object code—“the binary language comprised of zeros and ones through which the computer directly receives its instructions.” *Computer Associates Int'l, Inc. v. Altai, Inc.*, 982 F.2d 693, 698 (2d Cir. 1992).

The non-literal elements “include, among other things, the program’s sequence, structure, and organization, as well as the program’s user interface.” *Oracle*, 750 F.3d at

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 1355–56. The “user interface” includes the “screen displays” produced by the program. *Lotus*, 49 F.3d at 813. “Whether the non-literal elements of a program ‘are protected depends on whether, on the particular facts of each case, the component in question qualifies as an expression of an idea, or an idea itself.’” *Oracle*, 750 F.3d at 1355–56 (quoting *Johnson Controls, Inc. v. Phoenix Control Sys., Inc.*, 886 F.2d 1173, 1175 (9th Cir. 1989)). This approach serves to maintain “the dichotomy between ideas—‘the province of letters-patent’—and their expression—‘the subject of copyright.’” *20-20 Techs.*, 683 F. Supp. 2d at 151 (quoting *Baker v. Selden*, 101 U.S. 99, 102 (1880)).

“Circuit courts have struggled with, and disagree over, the tests to be employed when attempting to draw the line between what is protectable expression and what is not.” See *Oracle*, 750 F.3d at 1357 (comparing *Compare Whelan Assocs., Inc. v. Jaslow Dental Lab., Inc.*, 797 F.2d 1222, 1236 (3d Cir. 1986) (everything not necessary to the purpose or function of a work is expression), with *Lotus*, 49 F.3d at 815 (methods of operation are means by which a user operates something and any words used to effectuate that operation are unprotected expression)). One reason for this disagreement may be that “as one moves away from the literal code to more general levels of a program, it becomes more difficult to distinguish between unprotectable ideas, processes, methods or functions, on one hand, and copyrightable expression on the other.” *GlobeRanger Corp. v. Software AG*, 691 F.3d 702, 707 (5th Cir. 2012).

The “abstraction-filtration-comparison” test developed by the Second Circuit in *Altai* is the dominant test for “assessing whether the non-literal elements of a computer program constitute protectable expression.” *Oracle*, 750 F.3d at 1355–56; 4 Melville B. Nimmer & David Nimmer, Nimmer on Copyright § 13.03 (*Altai* provides the “dominant test”). “The *Altai* test involves three steps: abstraction, filtration, and comparison.” *Lotus*, 49 F.3d at 814. “The abstraction step requires courts to ‘dissect the allegedly copied program’s structure and isolate each level of abstraction contained within it.’” *Id.* (quoting *Altai*, 982 F.2d at 707.). “This step enables courts to identify the appropriate

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 23 framework within which to separate protectable expression from unprotected ideas.” *Lotus*, 49 F.3d at 814.

Under the second step of the *Altai* test, courts examine “the structural components at each level of abstraction to determine whether their particular inclusion at that level was ‘idea’ or was dictated by considerations of efficiency, so as to be necessarily incidental to that idea; required by factors external to the program itself; or taken from the public domain.” *Altai*, 982 F.2d at 707. The third step requires courts to “compare the protected elements of the infringed work (i.e., those that survived the filtration screening) to the corresponding elements of the allegedly infringing work to determine whether there was sufficient copying of protected material to constitute infringement.” *Lotus*, 49 F.3d at 814.

A few years after *Altai*, “the First Circuit took up the question of whether a ‘menu command hierarchy’ is copyrightable subject matter.” *20-20 Techs.*, 683 F. Supp. 2d at 153. “The menu command hierarchy refers to the 469 commands such as ‘Copy,’ ‘Print,’ and ‘Quit,’ that were arranged into 50 menus and submenus” in Lotus’s computer program for electronically performing accounting functions. *Id.* at 154. “Although [the defendant] did not copy any [of the plaintiff’s] source code, it exactly replicated the Lotus menu command hierarchy in its rival spreadsheet program.” *Id.* In other words, the defendant replicated the non-literal elements of Lotus’s computer program. The First Circuit ultimately ruled against Lotus, holding that the menu command hierarchy was an uncopyrightable “method of operation.” *Lotus*, 49 F.3d at 815.

In so holding, the First Circuit expressly declined to apply *Altai* in light of the “defendant’s admitted factual copying of an element of the plaintiff’s computer program.” *Maddog Software, Inc. v. Sklader*, 382 F. Supp. 2d 268, 278 (D.N.H. 2005). The *Lotus* court noted that it was not presented “with alleged nonliteral copying of computer code,” and so the issue was “whether the literal copying of the Lotus menu command hierarchy constitute[d] copyright infringement.” *Lotus*, 49 F.3d at 814–15.

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Lotus also noted that “[w]hile the *Altai* test may provide a useful framework for assessing the alleged nonliteral copying of computer code,” it was “of little help in assessing whether the literal copying of a menu command hierarchy constitutes copyright infringement.” *Id.*

The Federal Circuit, applying Ninth Circuit law, recently noted that the First Circuit’s approach is in tension with the law of other circuits. *See Oracle*, 750 F.3d at 1365 (“the hard and fast rule set down in *Lotus* . . . —i.e., that elements which perform a function can never be copyrightable—is at odds with the Ninth Circuit’s endorsement of the abstraction-filtration-comparison analysis” established in *Altai*). The Federal Circuit also noted that “no other circuit has adopted the First Circuit’s ‘method of operation’ analysis.” *Id.* Yet, *Lotus* remains the law of this Circuit, and so that case shines the beacon by which this court must steer.¹³

Since *Lotus*, courts in this Circuit have taken various approaches when evaluating claims of software infringement. One court applied both *Lotus* and *Altai* where the plaintiff did not specify the test to be used. *See ILOG, Inc. v. Bell Logic, LLC*, 181 F. Supp. 2d 3, 8 (D. Mass. 2002). Another court read “*Altai* through the lens of *Lotus*” to apply principles set forth in *Lotus* and to “filter out elements based on § 102(b) before filtering on the basis of merger, scenes a faire, or public domain.” *20-20 Techs.*, 683 F. Supp. 2d at 151. A third approach was followed by the *Maddog Software* court, which held that “*Lotus* does not foreclose the court’s use of *Altai*’s” test where the defendant denies copying or contends that the copied elements do not “constitute protected expression.” *Maddog Software*, 382 F. Supp. 2d at 278; *see also Lotus*, 49 F.3d at 815 (“the *Altai* test may provide a useful framework for assessing the alleged nonliteral copying of computer code”). That court then went on to apply the *Altai* test exclusively

¹³ The Supreme Court denied certiorari in *Oracle*, which detailed the various approaches by circuit courts, and so these issues “remain live for another day.” 4 Nimmer on Copyright § 13.03.

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 25 after noting that both parties agreed that *Altai* provided the “appropriate standard.” *See Maddog Software*, 382 F. Supp. 2d at 278.

1. Content of OPG’s Copyright

As an initial matter, OPG made no effort to present the source code corresponding to the software program that was registered. Providing evidence of the source code version covered by the copyright registration is imperative because it allows for a “direct comparison” between the allegedly infringing program and the precise version of the software program covered by the copyright—as opposed to a newer version of the software program that has not been registered. *See Airframe Systems*, 658 F.3d at 106–07. In *Airframe Systems*, the First Circuit affirmed summary judgment for the defendant where the plaintiff alleged copyright infringement of its software program but did not present any evidence of the source code. 658 F.3d at 106. The *Airframe Systems* court ruled that before the substantial similarity analysis can occur, “the plaintiff must necessarily establish *the content* of the copyrighted work that it contends was infringed.” *Id.* (emphasis added). Accordingly, the plaintiff was required “to present sufficient evidence of copying (including substantial similarity) with respect to at least one of the [software program’s] source code versions covered by its copyright registrations.” *Id.*; *see also Bridgmon v. Array Sys. Corp.*, 325 F.3d 572, 576–77 (5th Cir. 2003) (same).

To be sure, Solly testified that he did not “recall” that OPG’s source code had been altered since it was submitted for registration. In addition, while Frederiksen did not compare OPG’s source code with PRTD’s, Frederiksen testified that the post data¹⁴ created by both systems sheds some light into the content of their respective source codes. 2d Tr. 51, 58, 72, 73:15–25. None of the foregoing is sufficient to establish the content of the software program covered by the copyright registration. “In *Bridgmon*, the plaintiff had attempted to offer a ‘reconstruction’ of his original source code made by his

¹⁴ Frederiksen testified that post data is “data sent from a webpage backup to a server in response to a user hitting an enter button or some other indication.” 2d Tr. 72:5–10.

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 26 expert, but the district court excluded the reconstruction under the Best Evidence Rule.” *Airframe Systems*, 658 F.3d at 107 n.9 (quoting *Bridgmon*, 325 F.3d at 576 n.5). “The Best Evidence Rule requires that a party seeking to prove the ‘content’ of a writing must introduce the ‘original’ or a ‘duplicate’ of the original, unless it is established that (1) all originals have been lost or destroyed (absent bad faith by the proponent); (2) the original cannot be obtained; (3) the original is in the possession of an opposing party who refuses to produce it; or (4) the writing is not closely related to a controlling issue.” *Airframe Systems*, 658 F.3d at 107 n.9. OPG did not claim that any of the four exceptions operated to excuse compliance with the Best Evidence Rule. Thus, because OPG has not presented any versions of its source code to allow for a direct comparison, the court cannot conduct the substantial similarity analysis with respect to the source code.

2. Literal Elements

Even assuming, for the moment, that OPG had established the content of the source code protected by its copyright registration, there was insufficient evidence to establish that either the source code or object code (i.e., the literal elements) were copied. As an initial matter, it is important to note that the “distinction between literal and non-literal aspects of a computer program is separate from the distinction between literal and non-literal copying.” *Oracle*, 750 F.3d at 1356; *see also Johnson Controls*, 886 F.2d at 1175 (“The district court [correctly] held that Phoenix Control could infringe Johnson’s copyright without copying the literal elements of the program, which include the source and object code”). *Literal* copying “is verbatim copying of original expression.” *Oracle*, 750 F.3d at 1356. *Nonliteral* “copying is ‘paraphrased or loosely paraphrased rather than word for word.’” *Id.* (quoting *Lotus*, 49 F.3d at 814).

In this case, neither RSM nor PRTD have admitted to *any* copying, either literal or nonliteral, of OPG’s source code or object code. Moreover, OPG did not present any direct evidence, such as the testimony of a witness, to establish that either PRTD or RSM copied OPG’s source code or object code. Nor is there evidence that either PRTD or RSM

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 27 had any access whatsoever to the source code or object code so as to support an inference of such copying. Without such evidence, OPG likely cannot establish as a factual matter that PRTD or RSM copied OPG's source code or object code.

And even if OPG had presented some evidence to establish copying as a factual matter, the failure to present the source code covered by its copyright registration prevents the court, with or without the help of the expert witnesses, from conducting the substantial similarity analysis.¹⁵ See *Airframe Systems*, 658 F.3d at 107 (“The plaintiff's failure to produce sufficient evidence to prove the element of ‘substantial similarity’ [, which occurred when the plaintiff presented no evidence of the source code covered by the copyright registration,] was fatal to his infringement claim, even though there may have been ‘evidence of direct copying.’”) (quoting *Bridgmon*, 325 F.3d at 577). Thus, OPG likely cannot show that PRTD or RSM copied the literal elements of its software program.

3. Non-literal Elements

OPG also produced insufficient evidence to establish that it is likely to succeed on its claim for infringement of the non-literal elements of its software program. As an initial matter, OPG did not establish as a factual matter with direct or circumstantial evidence that RSM—which developed PRTD's System—had access to the non-literal elements of OPG's System. In this vein, RSM's Morel testified that his company did not have access to OPG's object code or source code, and that his company did not have access to OPG's System when it was developing PRTD's System. Morel did acknowledge that when he was developing PRTD's System, he interviewed PRTD's employees who were using OPG's System. When doing so, he noted that PRTD's employees had to look at two screens when using OPG's System. He made clear, however, that he was not shown how

¹⁵ “Where, as here, the copyrighted work involves specialized subject matter such as a computer program, some courts have held that the ‘ordinary observer’ is a member of the work’s ‘intended audience’ who possesses ‘specialized expertise.’” *Airframe Sys.*, 658 F.3d at 106 n.7 (collecting cases). The First Circuit “has yet to directly address this issue.” *Id.*

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OPG's System operated, and that he focused on the steps the employees took to sell stamps—not on the screens. The foregoing testimony, which was not rebutted by other evidence, is insufficient to establish that RSM had access to OPG's System, particularly the type of access that would likely be required to copy the non-literal elements of OPG's System.

To suggest that RSM did have access to the non-literal elements of OPG's System, OPG underscores that *PRTD*'s employees had access to OPG's System—as *PRTD*'s employees used OPG's System before *PRTD*'s new online system went live in April 2016. But this evidence does little to establish that *RSM* had access to the non-literal elements of OPG's System, such as the user interface, when developing *PRTD*'s System. Indeed, Morel testified that he became familiar with OPG's System as a result of this litigation. OPG also underscores that RSM had access to *PRTD*'s circular letters. But again, this evidence does not establish that RSM had access to either the literal or non-literal elements of OPG's System. Indeed, OPG does not suggest that its source code, object code, or screen displays, for example, were included in the information within the circular letters. Thus, even assuming there is probative similarity between OPG's System and *PRTD*'s, OPG has adduced insufficient evidence to show that RSM likely had access to the non-literal elements of OPG's System. And without such access, an inference of actual copying is untenable.

In light of the strained evidence put forward to show that RSM had access to the literal and non-literal elements of OPG's System, the independent creation defense becomes particularly relevant. To suggest that the independent creation defense was not viable, Frederiksen opined that *PRTD* provided "a very unreasonable amount of time to be able to design a robust system." 1st Tr. 49:13–19. Yet, neither Frederiksen's report nor her testimony provides an opinion as to whether RSM—with its prior experience on two *PRTD* projects—could develop *PRTD*'s System within the time period required by the RFP. To establish that *PRTD*'s System was independently created, Morel testified that

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PRTD had recently hired RSM for two projects. Morel testified that this prior experience allowed RSM's team to copy versions of its own code to develop PRTD's System in 12 to 14 weeks, and that "most of the final system" had already been created. Because Morel's testimony was largely unrebutted, PRTD is likely to have available the independent creation defense. In sum, the court should find that OPG likely cannot establish as a factual matter that the non-literal elements of OPG's System were copied.

Even if OPG had established copying of the non-literal elements as a factual matter, OPG likely cannot establish substantial similarity between the non-literal elements of OPG's System and PRTD's. At the outset, the parties urge the court to apply different tests. Frederiksen used the abstraction-filtration-comparison test, and OPG maintains that the copyright infringement claim should be evaluated under that standard. Docket No. 150 at 5. Dr. Phinney did not express that he used a different test, but at one point in the Department's brief, PRTD cited *Lotus* and argued that "the issuance of stamps and vouchers via an online system is an underlying idea or method of operation which is not copyrightable." Docket No. 37 at 11. The Department also argued alternatively that OPG was not entitled to relief under the *Altai* test. Docket No. 141 at 6–7. In light of the foregoing, and because *Lotus* remains the law of this Circuit, I follow *20-20 Techs'* approach in drawing applicable principles from *Lotus*, and reading "*Altai* through the lens of *Lotus*" to "filter out elements based on § 102(b) before filtering on the basis of merger, scenes a faire, or public domain." *20-20 Techs.*, 683 F. Supp. 2d at 151.

As an initial matter, "neither *Altai* nor *Lotus* directly considered the copyrightability of screen displays." *20-20 Techs.*, 683 F. Supp. 2d at 155. "The Second Circuit suggested that 'certain types of screen displays' would 'fall under the copyright rubric of audiovisual works,' and 'may be protectable regardless of the underlying program's copyright status.'" *Id.* (quoting *Altai*, 982 F.2d at 703). And the "First Circuit observed that 'users need not "use" any expressive aspects of the screen displays in order to operate *Lotus* 1–2–3; because the way the screens look has little bearing on how users

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 30 control the program, the screen displays” were not part of the program’s method of operation. *20-20 Techs.*, 683 F. Supp. 2d at 155 (quoting *Lotus*, 49 F.3d at 816). “The *Lotus* court took no position on ‘whether Lotus 1–2–3’s screen displays constitute[d] original expression capable of being copyrighted.’” *20-20 Techs.*, 683 F. Supp. 2d at 155 (*Lotus*, 49 F.3d at 816 n.10). “As such, the appearance of the screen is not a ‘method of operation’ as that term has been defined by the First Circuit.” *20-20 Techs.*, 683 F. Supp. 2d at 155. Because *Lotus* did not concern screen displays, the Department’s reliance on *Lotus* to press the “method of operation” argument is misplaced. *See 20-20 Techs.*, 683 F. Supp. 2d at 155.

In exploring the non-literal elements of OPG’s system and PRTD’s, the parties’ experts primarily focused on two screen displays. Where, as here, the plaintiff produces “a list of specifically protected elements,” the court “need not engage in the abstraction process described in *Altai* and eschewed in *Lotus*.” *20-20 Techs.*, 683 F. Supp. 2d at 154 (citing *MiTek Holdings v. Arce Eng’g Co.*, 89 F.3d 1548, 1555 (11th Cir. 1996) (“[I]f the copyright holder presents the court with a list of features that it believes to be protectable . . . , the court need not abstract further such features.”); *Bell Logic*, 181 F. Supp. 2d at 11 (court declined to “abstract” and proceeded to “filter” when parties identified elements of a computer program that were allegedly copied)). And the court may limit the analysis to the non-literal elements brought to the court’s attention by the parties. *See Softel, Inc. v. Dragon Med. & Sci. Commc’ns, Inc.*, 118 F.3d 955, 965 n.9 (2d Cir. 1997) (statements “referring to the court’s role in analyzing non-literal infringement claims [along the lines of] ‘a court should dissect the allegedly copied program’s structure and isolate each level of abstraction contained within it,’ should be taken only as statements as to what the court should do to analyze evidence properly brought before it by a party.”).

The parties’ experts focused on Screen 1 (screen display for web page used to buy a 5120 stamp) and Screen 2 (screen display for web page used to verify a stamp). “In most cases, while the constituent elements of the user interface or screen display are not

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 31 independently protectable, the user interface is protectable as a compilation with respect to its ‘unique selection and arrangement of all these features.’” *20-20 Techs.*, 683 F. Supp. 2d at 157 (collecting cases). With respect to Screen 1, any online system for the sale of such stamps must have some type of data field for the stamp’s value, the quantity of stamps that will be purchased, and any other information the Department requires for the sale of the stamp. Accordingly, the elements on the screen themselves should be filtered. Morel also testified that “drop down” menus are “standard to any system,” so the use of the drop down menus should also be dissected from the analysis. 2d Tr. 78:5–9.

Yet, Frederiksen maintained that even if some of the elements on the screen display could be filtered, the order and arrangement of the data fields constituted the copyrighted expression that was copied. But Dr. Phinney’s testimony and report—which I found persuasive—revealed that the data fields in the screen displays for OPG’s System and PRTD’s do not actually have the same order. The sequence of the elements is actually quite distinct. *See App’x A.* And while the arrangement for the three data fields at the bottom of Screen 1 are similar, Morel testified that the three data fields are placed in that location for a logical, efficient reason: namely, that a user would be required to skip the three data fields if they were placed at the top of the screen and were not relevant for the purchase of a stamp. This being the case, efficiency concerns and the doctrine of merger deny copyrightability to such an arrangement. *See Coquico*, 562 F.3d at 68; *Altai*, 982 F.2d at 707. After filtering the non-protectable elements, no expression that could have been copied remains. Thus, OPG likely cannot show that PRTD is liable for copyright infringement as to Screen 1.

OPG also likely cannot establish that PRTD is liable for copyright infringement as to Screen 2. *See App’x B.* This is so because PRTD’s system includes a CAPTCHA page (OPG’s System does not), and because the serial number that is entered into the PRTD System is created in a different manner than the number created by OPG’s System. *See T-Peg, Inc.*, 459 F.3d 97, 112 (“If the points of dissimilarity not only exceed the points of

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 32 similarity, but indicate that the remaining points of similarity are, within the context of plaintiff's work, of minimal importance, either quantitatively or qualitatively, then no infringement results.") (quoting 4 Nimmer on Copyright § 13.03[B][1][a]). PRTD's System uses an entity number for the first component of the four-component serial number. It also uses either an eight- or nine-digit number for that serial number's fourth component. OPG's System, on the other hand, begins the serial number with a user number, rather than an entity number, and always uses an eight digit number for the fourth component of the serial number. Thus, OPG likely cannot establish that PRTD's System copied the non-literal elements of its copyrighted software program.

B. Stamp Design

Turning to the OPG stamp design and the PRTD stamp design, OPG can likely establish as a factual matter that PRTD copied the arrangement of the elements on OPG's stamp. PRTD copied the arrangement of elements OPG used by publishing that arrangement in the circular letters. These circular letters, in turn, were used when developing the PRTD stamp. There is also probative similarity between the PRTD stamp and the OPG stamp. *See Johnson v. Gordon*, 409 F.3d 12, 18 (1st Cir. 2005) ("probative similarity" requires that the two works are "so similar that the court may infer that there was factual copying"). Indeed, when shown the two stamps, Gonzalez testified that they were "very similar." Accordingly, PRTD can likely establish an inference of actual copying.

But OPG likely cannot establish that PRTD's stamp is substantially similar to OPG's stamp. *See App'x C*. As an initial matter, when conducting the dissection analysis, "the court should not lose sight of the forest for the trees," *Coquico*, 562 F.3d at 68, and must "be careful not to over-dissect the plaintiff's work, causing it to ignore the plaintiff's protectable expression." *Sony Pictures Television, Inc.*, 704 F.3d at 180. With these principles in mind, I find that the points of dissimilarity exceed the points of similarity

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 33 after one dissects the non-protectable elements of the stamp design. *See T-Peg*, 459 F.3d at 112.

At the outset, some of the elements, and their arrangement, are functional and must be included in any stamp sold by PRTD. *See CMM Cable Rep, Inc. v. Ocean Coast Props., Inc.*, 97 F.3d 1504, 1519–20 (1st Cir. 1996) (copyright law denies protection to forms of expression directed solely at functional considerations). These elements—which are dictated by Regulation 59—include the type of stamp, the price of the stamp, and the date the stamp is sold. The arrangement of the elements serves a functional purpose, moreover, as it ensures that the information on the stamp is displayed in a logical manner that is accessible to the reader. The Hacienda logo and some type of hologram also must be included in any stamp sold by the Department. The foregoing elements can be seen in the Department’s 2002 stamp and the circular letters that predate any stamp created by PRTD. Moreover, the serial number in the PRTD stamp and the OPG stamp is also distinct, as the first and last components of the four-component serial number are created differently. The data matrix in the OPG stamp barcode is different from the one in the PRTD stamp: while each stamp’s data matrix has 16 squares, the bottom half of the PRTD stamp’s barcode is created in a different manner than the bottom half of the OPG stamp’s barcode.

In addition, the backgrounds of the PRTD stamp and OPG stamp are quite different. Notably, and significantly, the PRTD stamp has an artistic rendition of the La Garita Sentry Box at the San Felipe Del Morro Castle. Such artwork is wholly absent in the OPG stamp. What is more, the OPG stamp and PRTD stamp have slightly distinct colors: the OPG stamp is white and amber, while the PRTD stamp has a mustard yellow background. *See Segrets, Inc. v. Gillman Knitwear Co.*, 207 F.3d 56, 62 (1st Cir. 2000) (color “may be a factor, among others, in determining substantial similarity”). Thus, in light of the significant differences between the OPG stamp and PRTD stamp, OPG likely cannot establish that PRTD’s stamp is substantially similar to OPG’s copyrighted stamp.

II. Irreparable Harm

To establish irreparable harm, “a plaintiff need not demonstrate that the denial of injunctive relief will be fatal to its business.” *Ross-Simons of Warwick, Inc. v. Baccarat, Inc.*, 102 F.3d 12, 18 (1st Cir. 1996). Rather, “irreparable harm is a natural sequel” if the plaintiff shows that his “legal remedies are inadequate,” or that he will suffer a “substantial injury that is not accurately measurable or adequately compensable by money damages.” *Id.* At the outset, OPG contends that it is entitled to a presumption of irreparable harm upon a finding that the copyright claims are likely to succeed. Docket No. 20 at 47. In support of this argument, OPG relies on cases like *Concrete Machinery Co. v. Classic Lawn Ornaments, Inc.*, 843 F.2d 600 (1st Cir. 1988). In *Concrete Machinery*, the First Circuit held that “irreparable harm is usually presumed if likelihood of success on the copyright claim has been shown.” 843 F.2d at 611 (“no need actually to prove irreparable harm when seeking an injunction against copyright infringement”).

But cases like *Concrete Machinery* predate two Supreme Court decisions holding that a court may grant injunctive relief only after the moving party has satisfied each of the four traditional equitable principles. *eBay Inc. v. MercExchange, L.L.C.*, 547 U.S. 388 (2006) (“this Court has consistently rejected invitations to replace traditional equitable considerations with a rule that an injunction automatically follows a determination that a copyright has been infringed”); *see also Winter*, 555 U.S. at 20. In *Voice of the Arab World, Inc. v. MDTV Med. News Now, Inc.*, 645 F.3d 26, 34–35 (1st Cir. 2011), the First Circuit considered *eBay* and *Winter*, and concluded “that a request to preliminarily enjoin alleged trademark infringement is subject to traditional equitable principles.” In so holding, however, the First Circuit expressly declined to address (1) the “full impact of *eBay* and *Winter*,” or (2) whether a presumption of irreparable harm in trademark cases was inconsistent with *eBay*. *Id.* However, other courts have cogently addressed the full impact of *eBay* and *Winter*, and so this court need not sail on uncharted waters to assess the merits of OPG’s position.

The weight of authority holds that a presumption of irreparable harm is irreconcilable with the logic of *eBay*, and so some courts have expressly jettisoned any such presumption in copyright cases. *See Ferring Pharm., Inc. v. Watson Pharm., Inc.*, 765 F.3d 205, 217 (3d Cir. 2014) (“party seeking a preliminary injunction in a Lanham Act case is not entitled to a presumption of irreparable harm”); *Perfect 10, Inc. v. Google, Inc.*, 653 F.3d 976, 981 (9th Cir. 2011) (“the propriety of injunctive relief in cases arising under the Copyright Act must be evaluated on a case-by-case basis in accord with traditional equitable principles and without the aid of presumptions or a ‘thumb on the scale’ in favor of issuing such relief”); *Salinger v. Colting*, 607 F.3d 68, 77 (2d Cir. 2010) (“*eBay* applies with equal force (a) to preliminary injunctions (b) that are issued for alleged copyright infringement”); *Bethesda Softworks, L.L.C. v. Interplay Entm’t Corp.*, 452 F. App’x 351, 354 (4th Cir. 2011) (same); *Robert Bosch LLC v. Pylon Mfg. Corp.*, 659 F.3d 1142, 1149 (Fed. Cir. 2011) (same holding in the context of a patent claim). Accordingly, OPG must carry its burden of demonstrating that it is *likely* to suffer irreparable harm regardless of whether this court finds that it is likely to succeed on the merits.

In attempting to meet that burden, OPG argues that it will suffer irreparable harm in the absence of an injunction because (1) customers are confusing OPG’s System and PRTD’s; (2) OPG’s goodwill and business opportunities are being harmed; and (3) OPG has lost control over its copyrighted works. Docket No. 140 at 15–18. OPG’s first argument misapprehends the protections afforded by the Copyright Act. The “Copyright Act, unlike the Trademark Act, does not protect a copyright holder against acts that cause consumer confusion.” *Perfect 10, Inc. v. Amazon.com, Inc.*, 508 F.3d 1146, 1161 (9th Cir. 2007). And this is so because “[c]opyright, unlike trademark, rewards creativity and originality even if they interfere with the rights of an existing copyright holder.” *Christian Louboutin S.A. v. Yves Saint Laurent Am. Holdings, Inc.*, 696 F.3d 206, 224 n.20 (2d Cir. 2012). For example, the “independent creation” defense provides that “if a

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 36 writer or musician, through the creative process, independently arrives at an arrangement of words or notes that is the subject of a copyright, he may market the result of his creativity despite the existing copyright.” *Id.*; *see also Feist Publ’ns, Inc. v. Rural Tel. Serv. Co.*, 499 U.S. 340, 346 (1991) (“assume that two poets, each ignorant of the other, compose identical poems. Neither work is novel, yet both are original and, hence, copyrightable”).

OPG next highlights that the company labored over the course of nine years to build a client base of around 800 users for OPG’s System. To the extent OPG suggests that an injunction is necessary for OPG to maintain those clients, the argument lacks merit. This is so because the contract between PRTD and OPG for the operation of an online system has ended. For this reason, there is an insufficient “causal connection between” the irreparable harm to OPG’s business and the allegedly infringing conduct OPG hopes to enjoin: operation of the Department’s new online system for producing stamps and vouchers. *See Perfect 10*, 653 F.3d at 982; *MySpace, Inc. v. Wallace*, 498 F. Supp. 2d 1293, 1306 n. 3 (C.D. Cal. 2007) (irreparable-harm inquiry depends on “the harm suffered as a result of the defendant’s allegedly unlawful actions”). Indeed, OPG would likely have lost the 800 clients even in the absence of any copyright dispute because the Department chose not to extend OPG’s contract after deciding that it would centralize the online system.

OPG also claims that it has lost business opportunities because it was negotiating contracts with two municipalities for an online system to pay traffic tickets. As an initial matter, “injury arising from . . . copyright infringement can generally be measured in monetary terms by examining the ‘appropriation of a potential market for the . . . copyrighted work.’” *Ferring Pharm., Inc. v. Watson Pharm., Inc.*, 765 F.3d 205, 215 (3d Cir. 2014) (quoting David H. Bernstein & Andrew Gilden, *No Trolls Barred: Trademark Injunctions After eBay*, 99 Trademark Rep. 1037, 1055 (2009)). Yet, in some cases, “while the calculation of future damages and profits for each future sale might be

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 37 possible, any such effort would entail a substantial amount of speculation and guesswork that renders the effort difficult or impossible.” *Christopher Phelps & Associates, LLC v. Galloway*, 492 F.3d 532, 544 (4th Cir. 2007).

In this case, OPG claims that it has lost two business opportunities. As an initial matter, because OPG had not secured contracts with the two municipalities, OPG improperly asks the court to (1) assume that it will be able to secure those contracts, and (2) speculate as to the harm that OPG might *possibly* suffer absent an injunction. *See Winter*, 555 U.S. at 20 (possible harm is insufficient). Moreover, because Goble testified that the two municipalities decided to hold off on any contracts with OPG due to the copyright dispute, the causal connection between the harm to OPG’s business and PRTD’s System is attenuated at best.¹⁶ *See Ross-Simons*, 102 F.3d at 19 (“the plaintiff’s showing must possess some substance; a preliminary injunction is not warranted by a tenuous or overly speculative forecast of anticipated harm”). Finally, because “copyright infringement can generally be measured in monetary terms by examining the appropriation of a potential market for the . . . copyrighted work,” *see Ferring Pharm.*, 765 F.3d at 21, and because only two business opportunities that were close to materializing have been identified, OPG has not demonstrated that it will likely suffer harm that would be “difficult or impossible” to calculate. *Galloway*, 492 F.3d at 544.

OPG’s third argument—that OPG’s loss of control over its copyrighted works is sufficient to constitute irreparable harm—does not suffer the same fate as the previous two. A copyright holder has “the exclusive right to decide when, where, to whom, and for how much they will authorize transmission of their Copyrighted Works to the public.” *Warner Bros. Entm’t Inc. v. WTV Sys., Inc.*, 824 F. Supp. 2d 1003, 1012 (C.D. Cal. 2011). Because a copyright holder “has the right to control the use of its copyrighted materials, . . . irreparable harm inescapably flows from the denial of that right.” *Taylor Corp. v. Four*

¹⁶ In this regard, it bears noting that PRTD did not move for an injunction that would enjoin the use of OPG’s System in the Puerto Rico market.

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Seasons Greetings, LLC, 403 F.3d 958, 968 (8th Cir. 2005). Accordingly, if OPG ultimately succeeds on the merits, it will have suffered irreparable harm as a result of losing control of its copyrighted works. Moreover, intangible harm to the goodwill of the copyrighted works *themselves*, which OPG asserts is occurring due to the loss of control, is sufficient to constitute irreparable harm. *See, e.g., Nat'l Geographic Soc. v. Classified Geographic*, 27 F. Supp. 655, 661 (D. Mass. 1939) (“The inferiority of the defendant’s compilations was . . . bound to injuriously affect the reputation of the plaintiff’s copyrighted works and to impair its goodwill”). Thus, the court should find that OPG will likely suffer some irreparable harm absent a preliminary injunction.

III. Balance of Hardships

Under the third factor, the court must balance “the hardship that will befall the nonmovant if the injunction issues . . . with the hardship that will befall the movant if the injunction does not issue.” *Mercado-Salinas v. Bart Enterprises Intern., Ltd.*, 671 F.3d 12, 19 (1st Cir. 2011). A “court’s findings regarding likelihood of success in a copyright action, as in other actions, . . . should be placed in the scales when it weighs the balance of the harms.” *Concrete Mach.*, 843 F.2d at 612. “This approach should prevent the unjust result of allowing an infringer to continue his activities, despite a strong showing of likelihood of success by the plaintiff, simply because the defendant’s principal enterprise is infringement.” *Id.* “On the other hand, it allows consideration of relative hardships to be a significant, and perhaps determinative, factor when the defendant has shown it may suffer significant harm and the plaintiff has made only a marginal showing of likelihood of success.” *Id.*

In this case, OPG has not established that it is likely to succeed on the merits of its copyright claims. Without an injunction, OPG may continue to have difficulties securing contracts for its online system. And OPG’s copyrighted works may suffer harm to their goodwill. But notably, because PRTD has decided to centralize the online system for the sale and distribution of stamps, OPG will likely not run an online system for PRTD

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 39 regardless of whether an injunction issues. So to the extent OPG presses this hardship, it merits little weight.

On the other hand, PRTD has persuasively argued, and presented evidence to show, that PRTD's System was independently created. If an injunction issues, PRTD will likely suffer significant hardship from being deprived of using the independently created software program. PRTD will also likely be prevented from collecting a significant portion of its revenues, further paralyzing Puerto Rico's economy. *See Wal-Mart Puerto Rico, Inc. v. Zaragoza-Gomez*, No. 16-1370, 2016 WL 4447261, at *1 (1st Cir. Aug. 24, 2016) ("The Commonwealth of Puerto Rico is in dire financial straits"). In this vein, OPG suggests that PRTD's hardships are overstated because the Department could sell pre-printed stamps. But Gonzalez credibly testified that the employees at the Colecturías are incapable of absorbing the sales from PRTD's System. What is more, both parties agree that collecting revenue from pre-printed stamps has previously been the subject of pervasive fraud. If an injunction issues, such issues may lead the Department to lose additional revenue. Thus, the court should find that the balance of equities tips in PRTD's favor.

IV. Public Interest

The final factor, the public interest, weighs strongly in favor of not granting the injunction. "The public interest that is referred to in the test for a preliminary injunction means the public's interest in the issuance of *the injunction itself*." *Braintree Labs., Inc. v. Citigroup Glob. Markets Inc.*, 622 F.3d 36, 45 n.8 (1st Cir. 2010). The Supreme Court has repeatedly cautioned that "courts of equity should pay particular regard for the public consequences in employing the extraordinary remedy of injunction." *Winter*, 555 U.S. at 24 (quoting *Weinberger v. Romero-Barcelo*, 456 U.S. 305, 312 (1982)); *see also Railroad Comm'n of Tex. v. Pullman Co.*, 312 U.S. 496, 500 (1941).

As an initial matter, "the issue of public policy *rarely* is a genuine issue if the copyright owner has established a likelihood of success: 'Since Congress has elected to

Commonwealth of Puerto Rico, Treasury Department v. OPG Technology, Inc., Civil No. 15-3125 (JAG/BJM) 40 grant certain exclusive rights to the owner of a copyright, it is virtually axiomatic that the public interest can only be served by upholding copyright protections and, correspondingly, preventing the misappropriation of the skills, creative energies, and resources which are invested in the protected work.”” *Concrete Mach. Co.*, 843 F.2d at 612 (emphasis added) (quoting *Apple Computer, Inc. v. Franklin Computer Corp.*, 714 F.2d at 1255 (3d Cir. 1983)). Because OPG has not established a likelihood of success on the merits, the public interest does not militate toward granting an injunction in this case.

But even if this court finds that OPG will likely succeed on the merits, the public consequences that will flow from an injunction provide a weighty countervailing consideration that should militate against issuing an injunction. This is so because when “the impact of an injunction reaches beyond the parties, carrying with it a potential for public consequences, the public interest will be relevant to whether the district court grants the preliminary injunction.” *Stormans, Inc. v. Selecky*, 586 F.3d 1109, 1139 (9th Cir. 2009). The full impact of an injunction in this case would likely reach beyond PRTD, OPG, RSM, and Donnelley. Because PRTD’s System is being used to collect a substantial portion of Puerto Rico’s revenue, halting the system would likely harm the public agencies that depend on that revenue. In turn, the public that depends on the services provided by those agencies would also be harmed. The public will also suffer since, after all, the sale of stamps via an online system makes it easier for the public to purchase stamps for important documents like wills and mortgages. If an injunction issues, the public would not, for example, be able to buy stamps on weekends or after 7:00 p.m.

OPG again claims that PRTD’s claims that the public interest will suffer are overstated. But the preponderance of the evidence at the hearing was to the effect that PRTD could not collect the revenue it is collecting now if the Department relied on the sale of pre-printed stamps. Gonzalez credibly testified that the Colecturías could not absorb the sales from PRTD’s System. And no evidence was presented as to the amount of inventory PRTD has in stock. Without such evidence, it is unclear whether PRTD

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presently has sufficient pre-printed stamps to collect the amount of revenue it is presently collecting. Without evidence of the present circumstances, little weight should be given to OPG's assertions that PRTD was able to sell pre-printed stamps before 2001, as well as between 2006 and 2008. Thus, the public interest factor strongly weighs in favor of denying the injunction. In sum, because three of the traditional equitable principles weigh against OPG, the court should not issue a preliminary injunction.

CONCLUSION

For the foregoing reasons, OPG's request for a preliminary injunction should be **DENIED**.

This report and recommendation is filed pursuant to 28 U.S.C. § 636(b)(1)(B) and Rule 72(d) of the Local Rules of this Court. Any objections to the same must be specific and must be filed with the Clerk of Court **within fourteen days** of its receipt. Failure to file timely and specific objections to the report and recommendation is a waiver of the right to appellate review. *See Thomas v. Arn*, 474 U.S. 140, 155 (1985); *Davet v. Maccorone*, 973 F.2d 22, 30–31 (1st Cir. 1992); *Paterson-Leitch Co. v. Mass. Mun. Wholesale Elec. Co.*, 840 F.2d 985 (1st Cir. 1988); *Borden v. Sec'y of Health & Human Servs.*, 836 F.2d 4, 6 (1st Cir. 1987).

IT IS SO RECOMMENDED.

In San Juan, Puerto Rico, this 6th day of September 2016.

S/Bruce J. McGiverin
BRUCE J. McGIVERIN
United States Magistrate Judge

Appendix A: Screen 1

PRTD v. OPG: Report of Barbara Frederiksen-Cross, Exhibit 3: Purchase Stamp Type 5120

Comparison of OPG's and PRTD's Web Page for Purchasing Stamp 5120

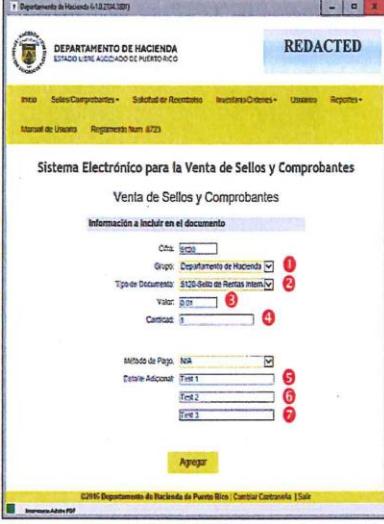
OPG Page for Purchasing Stamp 5120	PRTD Page for Purchasing Stamp 5120
	

Exhibit to Expert Report of Barbara Frederiksen-Cross

Page 2

Appendix B: Screen 2

PRTD v. OPG: Report of Barbara Frederiksen-Cross, Exhibit 5: Validating a Stamp's Identifier

Comparison of OPG's and PRTD's Web Page for Validating a Stamp's Identifying Number

OPG Page for Validating a Stamp's Identifier	PRTD Page for a Stamp's Identifier
<p>OPG's system allows a user to verify a purchased stamp by entering the stamp's four-part number in the web page shown below:</p> 	<p>PRTD's system allows a user to verify a purchased stamp by entering the stamp's four-part number in the web page shown below:</p> 

Appendix C: OPG Stamp (top) v. PRTD Stamp (bottom)



Appendix D: 2002 PRTD Stamp

